RESEARCH INSTRUMENTS
Enabling Next-Generation Science

Pure·NA

PRODUCT INFORMATION

PureNA™ rTaq DNA Polymerase (recombinant)
Cat# ET01-500

www.ri.com.sg

Kit Components

Cat#	ET01-500
Components	**500 Units**
PureNA™ rTaq	100 µL
10 x Reaction Buffer (with 15 mM MgCl2)	1 mL x 2
6 x loading dye	500 µL

Storage

Store all reagents at -20°C.

Description

PureNA™ rTaq DNA Polymerase is a 94 kD thermostable DNA polymerase. It is an enhanced Taq DNA polymerase which is suitable for all standard PCR applications. *PureNA*™ rTaq DNA Polymerase is treated with specific mutations based on the kinetic principle of enzyme reaction. It has low dependence on enzyme activators and a low mismatching rate in amplification, resulting in a high efficiency of amplification. The amplified products are in long fragments with good specificity. The amplified DNA fragments will have an A base at 3' end, which work very well in downstream application such as TA clone directly.

Definition of Activity Unit

1. 5'-3' exonuclease activity ..... Yes
2. Extra A addition ..... Yes
3. 3'-5' exonuclease activity ..... No
4. DNase contamination ..... No
5. RNase contamination ..... No
6. Protease contamination ..... No
7. DNA contamination ..... No
8. RNA contamination ..... No

PureNA™ rTaq DNA Polymerase is purified by HPLC twice, various contaminations was effectively eliminated. It keeps the enzyme high purity and high activity.

Applications

- PCR amplification of DNA fragments up to 6 kb
- DNA labeling
- DNA sequencing
- Generation of PCR product for TA cloning

Protocols

1. Combine all the components below in a sterile, nuclease-free microcentrifuge tube on ice. It is recommended to prepare a PCR master mix by mixing buffer, dNTPs, primers, Taq polymerase and master to reduce the possibility of pipetting errors.

10 x Reaction Buffer	5 µL
dNTP Mixture (2.5 mM each)	4 µL
Sense primer (10 µM)	1-5 µL
Antisense primer (10 µM)	1-5 µL
***PureNA*™ rTaq**	0.4 µL (2U)
Template DNA	10-1000 ng
ddH_2O (nuclease-free)	up to 50 µL
Total Volume	50 µL

2. Gently vortex the samples and spin down.

3. Perform PCR using your standard parameters. An example profile is given below

PCR condition

94°C	3-5 mins	
94°C	30 sec	30-40 cycles
50-65°C	30 sec	
72°C	1 kb / min	
72°C	5 mins	

Note: The reaction mixture for PCR should be different since different samples and primers are used. In actual working, different PCR conditions should be set according to the target fragment length, base sequence, primer length and other actual conditions.